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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HARRITY SNYDER, LLP 11350 Random Hills Road SUITE 600 FAIRFAX, VA 22030			EXAMINER GOODCHILD, WILLIAM J	
			ART UNIT 2145	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/665,359

Applicant(s)

HEYMANS ET AL.

Examiner

WILLIAM J. GOODCHILD

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14 and 16-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14 and 16-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 30-34 and 47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 30-34 and 47 can be considered to be software in accordance with applicants specification, (page 19, lines 2-3). In order for a claim to be statutory, it must fall within a process, machine, manufacture, or a composition of matter. Software does not fall within a statutory category since it is not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 6, 8-10 rejected under 35 U.S.C. 102(e) as being anticipated by Shultz et al., (US Publication No. 2003/0061211), (hereinafter Shultz).

Regarding claim 6, Shultz discloses collecting location information associated with first users that access a resource [Shultz, paragraphs 14 and 17]; determining second location information associated with a second user [Shultz, paragraphs 14 and 17, location information is gathered for multiple users]; providing a document associated with the resource to the second user based, at least in part, on matching of the geographic relevance of the resource to the second location information [Shultz, paragraphs 14 and 17].

Regarding claim 8, Shultz further discloses the resource is a web document [Shultz, paragraphs 7 and 19].

Regarding claim 9, Shultz further discloses the document associated with the resource is an advertisement [Shultz, paragraph 19].

Regarding claim 10, Shultz further discloses the document associated with the resource is the same as the resource [Shultz, paragraphs 7 and 19].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 7, 11, 13-14, 16, 18-21, 30-32, 35-36, 38-39, 42-45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shultz, and further in view of Scarfe et al., (International Publication No. WO 02/15479), (hereinafter Scarfe).

Regarding claim 1, Shultz discloses determining geographic locations associated with users that access a resource [Shultz, paragraph 17];

storing an indication that the resource is associated with a geographic area corresponding to the located cluster [Shultz, paragraphs 14 and 17].

Shultz does not specifically disclose performing a cluster analysis of the geographic locations to locate a cluster of the geographic locations. However, Scarfe discloses deciding which cluster the IP address fall into [Scarfe, page 18, lines 5-14 and pages 16-17]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include clustering IP address based on location in order to tabulate where users accessing a particular web site are located.

Regarding claim 2, Shultz further discloses the resource is a web advertisement [Shultz, paragraph 19].

Regarding claim 3, Shultz further discloses the resource is a web site [Shultz, paragraphs 7 and 19].

Regarding claim 4, Shultz-Scarfe further discloses the geographic locations are derived from network address [Scarfe, paragraph 59].

Regarding claim 7, Shultz-Scarfe further discloses the collecting location information further comprises collecting location information from multiple first users [Shultz, paragraphs 14 and 17, location information is gathered for multiple users], and wherein performing an analysis further comprises performing a cluster analysis [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 11, Shultz-Scarfe further discloses the location information includes network addresses of the first users [Scarfe, paragraph 59].

Regarding claim 13, Shultz-Scarfe further discloses collecting the location information associated with the first users includes collecting at least one of location information stored in cookies, location information derived from search terms entered by the user, and location information derived from browsing patterns [Scarfe, paragraph 43].

Regarding claim 14, Shultz-Scarfe further discloses determining a plurality of locations associated with users that access the web site [Shultz, paragraph 17]; analyzing, via a cluster analysis [Scarfe, page 18, lines 5-14 and pages 16-17], the determined locations to determine geographical relevance of the web site [Shultz, paragraphs 14 and 17]; and storing the determined geographical relevance of the web site [Shultz, paragraphs 14 and 17].

Regarding claim 16, Shultz-Scarfe further discloses the plurality of locations are network address of the users [Scarfe, paragraph 59].

Regarding claim 18, Shultz-Scarfe further discloses determining the plurality of locations associated with the users includes at least one of using location information stored in cookies, using account information of the users, using search terms entered by the user, and using browsing patterns of the users [Scarfe, paragraph 43].

Regarding claim 19, Shultz further discloses determining the plurality of locations associated with the users includes collecting location information using an application running locally to the users [Shultz, paragraphs 14 and 34].

Regarding claim 20, Shultz further discloses the applications include at least one of a browser tool bar, a browser plug-in, and a browser [Shultz, paragraph 34].

Regarding claim 21, Shultz-Scarfe further discloses the location information includes at least one of IP addresses of the users and network addresses of resources accessed by the users [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 30, Shultz-Scarfe further discloses a document selector component configured to locate a set of documents relevant to a search query [Shultz, paragraphs 12-13], the document selector component basing the determination of relevancy at least in part on geographic relevance information associate with documents in the set of documents [Shultz, paragraphs 12-13]; and a geographic relevance component configured to generate the geographic relevance information [Shultz, paragraph 12] associated with the documents in the set of documents by gathering a plurality of network addresses of users that access the documents in the set of documents [Scarfe, page 18, lines 5-14 and pages 16-17], mapping the plurality of network addresses to location data points [Scarfe, page 18, lines 5-14 and pages 16-17], and performing a cluster analysis on the location data points to locate clusters of the located data points [Scarfe, page 18, lines 5-14 and pages 16-17], the located clusters indicating areas of geographic relevance [Shultz, paragraphs 12-13], where the computer-implemented search engine returns search results to a user based on the set of relevant documents [Shultz, paragraphs 14 and 17].

Regarding claim 31, Shultz-Scarfe further discloses the geographic relevance component performs the cluster analysis [Scarfe, page 18, lines 5-14 and pages 16-17] on the location data points based on a determination of whether the location data points tend to form one or more clusters [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 32, Shultz-Scarfe further discloses the geographic relevance component additionally determines a probability that a location associated with a user that submitted the search query is geographically relevant to the documents in the set of documents [Shultz, paragraph 14] based on a statistical model applied to the one or more clusters [Scarfe, page 11, lines 8-18].

Regarding claim 35, Shultz-Scarfe further discloses determining a geographic location associated with the user [Shultz, paragraphs 12-13];
acquiring geographic relevance information for the network resource [Shultz, paragraphs 14 and 17], the geographic relevance information including information that defines at least one cluster associated with the network resource [Scarfe, page 18, lines 5-14 and pages 16-17], the information defining the at least one cluster including at least a center point of the cluster and a measure of dispersion of the cluster [Scarfe, page 11, lines 8-18];
determining the probability that the user is geographically relevant to the network resource [Shultz, paragraph 14] based on a statistical model applied to the at least one cluster [Scarfe, page 11, lines 8-18]; and

returning search results to the user based on the determined probability [Shultz, paragraphs 14 and 17].

Regarding claim 36, Shultz-Scarfe further discloses the determination of geographic location associated with the user is based on terms in the search query [Shultz, paragraphs 12-13].

Regarding claim 38, Shultz-Scarfe further discloses gathering a plurality of network addresses of users that access the network resource [Shultz, paragraph 17]; mapping the plurality of network addresses to location data points [Scarfe, page 18, lines 5-14 and pages 16-17]; performing a cluster analysis on the location data points to generate the geographic relevance information [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 39, Shultz-Scarfe further discloses the determination of geographic relevance of the user is based on web access patterns of the user [Shultz, paragraphs 14 and 17].

Regarding claim 42, Shultz-Scarfe further discloses determining whether the location data points tend to form one or more clusters [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 43, Shultz-Scarfe further discloses associating geographic location information with the network resource based on the one or more clusters [Shultz, paragraphs 14 and 17].

Regarding claim 44, Shultz-Scarfe further discloses the plurality of network addresses are Internet Protocol (IP) address [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 45, Shultz-Scarfe further discloses gather a plurality of network addresses of users that access the network resource [Shultz, paragraph 17]; map the plurality of network addresses to data points that correspond to geographic locations [Scarfe, page 18, lines 5-14 and pages 16-17]; perform a cluster analysis on the data points to locate one or more cluster of the data points [Scarfe, page 18, lines 5-14 and pages 16-17]; determine a geographic location for the network resource based on the cluster analysis [Shultz, paragraphs 14 and 17]; and store an indication that the network resource is associated with the determined geographic location [Shultz, paragraphs 14 and 17].

Regarding claim 47, Shultz-Scarfe further discloses means for gathering a plurality of network addresses of users that access the network resource [Shultz, paragraph 17]; means for mapping the plurality of network addresses to data points that correspond to geographic locations [Scarfe, page 18, lines 5-14 and pages 16-17];

means for performing a cluster analysis on the data points to locate one or more clusters of the data points [Scarfe, page 18, lines 5-14 and pages 16-17];
means for determining a geographic relevance of the network resource based on the located one or more clusters [Shultz, paragraphs 14 and 17]; and
means for storing an indication of the geographic relevance of the network resource [Shultz, paragraphs 14 and 17].

6. Claims 12, 17, 22-26, 28, 40-41 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shultz-Scarfe as applied to claims 11 above, and further in view of McGuire et al., (US Publication No 2003/0023489), (hereinafter McGuire).

Regarding claim 12, Shultz-Scarfe do not specifically disclose mapping the network address to two-dimensional coordinate information. However, McGuire discloses mapping IP addresses to geographical information such as the latitude and longitude [McGuire, paragraph 112]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include latitude and longitude coordinates in order to gather geographical information on a users location.

Regarding claim 17, Shultz-Scarfe-McGuire further discloses mapping the plurality of network address to two-dimensional coordinate information [McGuire, paragraph 112], wherein analyzing the determined locations includes performing the cluster analysis

[Scarfe, page 18, lines 5-14 and pages 16-17] based on the two-dimensional coordinate information [McGuire, paragraph 112].

Regarding claim 22, Shultz-Scarfe-McGuire further discloses associating the network addresses with a two-dimensional point defined by latitude and longitude values estimated from the network addresses [McGuire, paragraph 112].

Regarding claim 23, Shultz-Scarfe-McGuire further discloses mapping the network addresses to cities that are estimated to be closest to physical locations associated with the network addresses [Shultz, paragraph 18]; mapping the cities to a two-dimensional point defined by latitude and longitude values [McGuire, paragraph 112].

Regarding claim 24, Shultz-Scarfe further discloses determining whether the plurality of two-dimensional coordinates tends to form one or more clusters [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 25, Shultz-Scarfe further discloses associating geographic location information with the resource [Shultz, paragraphs 14 and 17] based on the one or more clusters [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 26, Shultz-Scarfe further discloses determining a probability that a location associated with a particular user is within the geographic location associated with the web resource [Shultz, paragraph 14] based on a statistical model applied to the one or more clusters [[Scarfe, page 11, lines 8-18];

Regarding claim 28, Shultz-Scarfe further discloses the plurality of network addresses are Internet Protocol (IP) address [Scarfe, page 18, lines 5-14 and pages 16-17].

Regarding claim 40, Shultz-Scarfe-McGuire further discloses associating the gathered network addresses with two-dimensional points defined by latitude and longitude values estimated from the network address [McGuire, paragraph 112].

Regarding claim 41, Shultz-Scarfe-McGuire further discloses mapping the network addresses to cities that are estimated to be close to physical locations associated with the network addresses [[Shultz, paragraph 18];
mapping the cities to two-dimensional points defined by latitude and longitude values [McGuire, paragraph 112].

Regarding claim 46, Shultz-Scarfe-McGuire further discloses the data points are each defined by latitude and longitude values [McGuire, paragraph 112].

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7. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shultz-Scarfe-McGuire as applied to claim 17 above, and further in view of Hourì (US Patent No. 6,665,715).

Regarding claim 27, Shultz-Scarfe-McGuire do not specifically disclose normalizing the determined locations based on populations associated with locations of the determined locations. However, Hourì, in the same field of endeavor discloses based on the number of users, the data may relate to a city, state, country etc. [Hourì, column 7, line 59 – column 8, line 4]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the number of users in a location in order to normalize geographical information on a users location.

Regarding claim 29, Shultz-Scarfe-McGuire-Hourì further discloses dynamic IP addresses are given less weight in the cluster analysis than static IP address [Hourì, column 2, lines 34-40].

8. Claims 33-34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shultz-Scarfe as applied to claim 30 above, and further in view of Hourì (US Patent No. 6,665,715).

Regarding claim 33, Shultz-Scarfe do not specifically disclose performing the cluster analysis on the location data points, the geographic relevance component is further

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configured to normalize the location data points. However, Houri, in the same field of endeavor discloses based on the number of users, the data may relate to a city, state, country etc. [Houri, column 7, line 59 – column 8, line 4]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the number of users in a location in order to normalize geographical information on a users location.

Regarding claim 34, Shultz-Scarfe-Houri further discloses the normalizing is based at least in part on population associated with the location data points [Houri, column 7, line 59 – column 8, line 4].

Regarding claim 37, Shultz-Scarfe-Houri further discloses the statistical model is based on a Gaussian model [Houri, column 7, lines 55-58, the process of step 58 is repeated for each level of information (filtering of the information), until the percentage threshold is satisfied].

Response to Arguments

9. Applicant's arguments filed 01/28/2008 have been fully considered but they are not persuasive.

A – Applicant argues "The Examiner also alleged that the claim 30 and 47 can be considered software, which does not fall within a process, machine, manufacture, or a

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composition of matter (non-final Office Action. p. 6.). While not necessarily agreeing with the Examiner, Applicants have amended claims 30-34 and 47 to address the Examiner's concerns and in order to expedite prosecution."

A – Amended claims 30-34 and 47 can still be considered as software. Suggested ways to overcome the rejection would be to include within the claim [not within the preamble] hardware components such as memory, RAM or stored on storage medium [which should be defined in the specification as a hard drive or RAM etc].

10. Applicant's arguments with respect to double patenting and 102 / 103 rejections for claims 1-4, 6-14, 16-47 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM J. GOODCHILD whose telephone number is (571)270-1589. The examiner can normally be reached on Monday - Friday / 8:00 AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WJG
04/09/2008

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145